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MONTANA'S HIGHWAYS

Published bi-monthly for the employees of the Montana Department of Highways, state-wide.

SPECIAL INFORMATIONAL EDITION

Your Department of Highways - - -

*How it builds--
finances--and
maintains Montana's
roads.*

The purpose of this folder is to explain what the Montana Department of Highways is and what it does—how it works—where it gets its money—and also what happens when the sources of its engineering and construction funds dry up, for one reason or another. The folder also will show that the decisions made by the Department are not the result of caprice or chance, whim or favoritism, but instead by serious consideration of all the hard economic facts of human needs, weighed against the availability of funds and land and appropriate talent.

"BIG SKY" — BIG STATE

Montana is the fourth largest state in the nation, averaging 550 miles in length and 275 miles in width. One might almost expect, then, that the Department of Highways is also the largest agency in the state since it is responsible for the designation, construction, maintenance and administration of the state's highway system, with the exception that county officials have the privilege of selecting secondary highways; and most such highways are maintained by the counties. Certain cities, too, exercise joint jurisdiction with the Department in the development and management of streets and roads. This is a big business, requiring the resources and activities to match.

Presently in Montana there are some 77,919 total surface miles of road available to users in Primary, Secondary, Rural and Municipal categories. The completed Interstate mileage is carried in this total within the Primary System.

(Continued on Page 2)



In the mountains, men, machines and ingenuity labor to lay down modern roads for modern needs. Rock drilling here, for pre-splitting operations.

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ROAD BUILDING NEEDS SPECIAL SKILLS

Building a modern road is an enormously complex undertaking involving almost the full range of man's acquired technology. When, today, over a span of 50 years, each mile of road answers the needs of 63% more people, 800% more vehicles and 1800% more travel—an impact which makes its pulse felt even in Montana—it is no longer possible to carve out a rustic way from Start-out Village to Destination City, aim

"BIG STATE"—(From Page 1)

Considering the Interstate System by itself, the 1971-72 Fiscal year Annual Report shows the present traveled way stretching out for 1,206.3 miles. Estimated final length, when completed to four-lane standards, the Interstate should provide 1,188.7 miles of super-highway.

it along a reasonably straight line and exclaim "That's that."

A great deal more goes on in the background than one realizes.

Let's look at the prime-moving organization itself and some of the forces within it.

Under Executive Reorganization—which became effective December 16, 1971,—the Director of Highways is appointed by the Governor, subject to confirmation of the Senate. The director is the chief administrative officer of the department and serves at the pleasure of the Governor.

The five-man State Highway Commission is a quasi-judicial board which is appointed by the Governor. The majority of the board is appointed to serve for terms concurrent with the term of the Governor, and the remaining members are appointed for terms beginning January 1, 1975, and for staggered terms thereafter. The chairman is designated by the Governor.

The Director of Highways is responsible for the overall operation of the department, and appoints em-



Here a contractor's crew and equipment scratch out the initial grade of a new Interstate link in the midsection of the Treasure State. Any aspect of road building seems fascinating to the onlooker.



ployees to the various divisions, bureaus, sections and units and also delegates authority and responsibility to such employees. Department of Highways headquarters, home of the Commission, and the hub of coordination in the state, is in Helena.

Further, Montana is divided into eleven Administrative Divisions. Each division is headed by a Division Construction Supervisor and a Division Maintenance Chief. Division offices are located at Missoula, Kalispell, Butte, Havre, Bozeman, Great Falls, Glendive, Wolf Point, Billings, Miles City and Lewistown.

The eleven Division Construction Supervisors are directly responsible to the Chief of the Construction Bureau in Helena Headquarters. These supervisors have the responsibility of overseeing all construction projects in their respective divisions, plus such other duties as reviewing project pri-

Rock work, again, in the mountainous west. Preparing a section of hill for blasting.



An early-stage construction photograph showing progress on I-15 between Helena and Boulder. Aerial oblique shots are taken on a monthly basis to monitor work progress.

sonnel including, generally, an office engineer, office manager and materials supervisor. Right of way work is carried on, with personnel assigned to the field, in conjunction with Helena headquarters.

In addition to the full range of engineering disciplines obviously required for the increasingly complex task of building roads for tomorrow,

a solid and integrated support, or back up, must come from the legal and accounting departments, contract plans unit, data processing, internal review, materials laboratory, planning and research bureau, public hearing unit, personnel office, preconstruction bureau; processing, advertising, safety, shop activity, motor (continued on page 11)

THE PRECONSTRUCTION FUNCTION

The function of the Preconstruction Bureau embraces just about every technical activity required for new or improved highway projects prior to the time construction work begins. It encompasses research, planning, programming, surveying; preparation of detailed design plans and impact statements; acquisition of rights of way and utility right of way plus the clearance of a surprising number of details pertinent to proposed projects.

Preconstruction is part of the Engineering Division operating as Preconstruction, Bridge, Right of Way Sections and the Project Control Unit.

An accompanying flow diagram (see center spread) shows the principal work elements and time periods for the preconstruction function from the development of long-range planning through the letting of construction contracts. The design of bridges, and acquisition of right of way are the responsibilities of the bridge and right of way sections respectively.

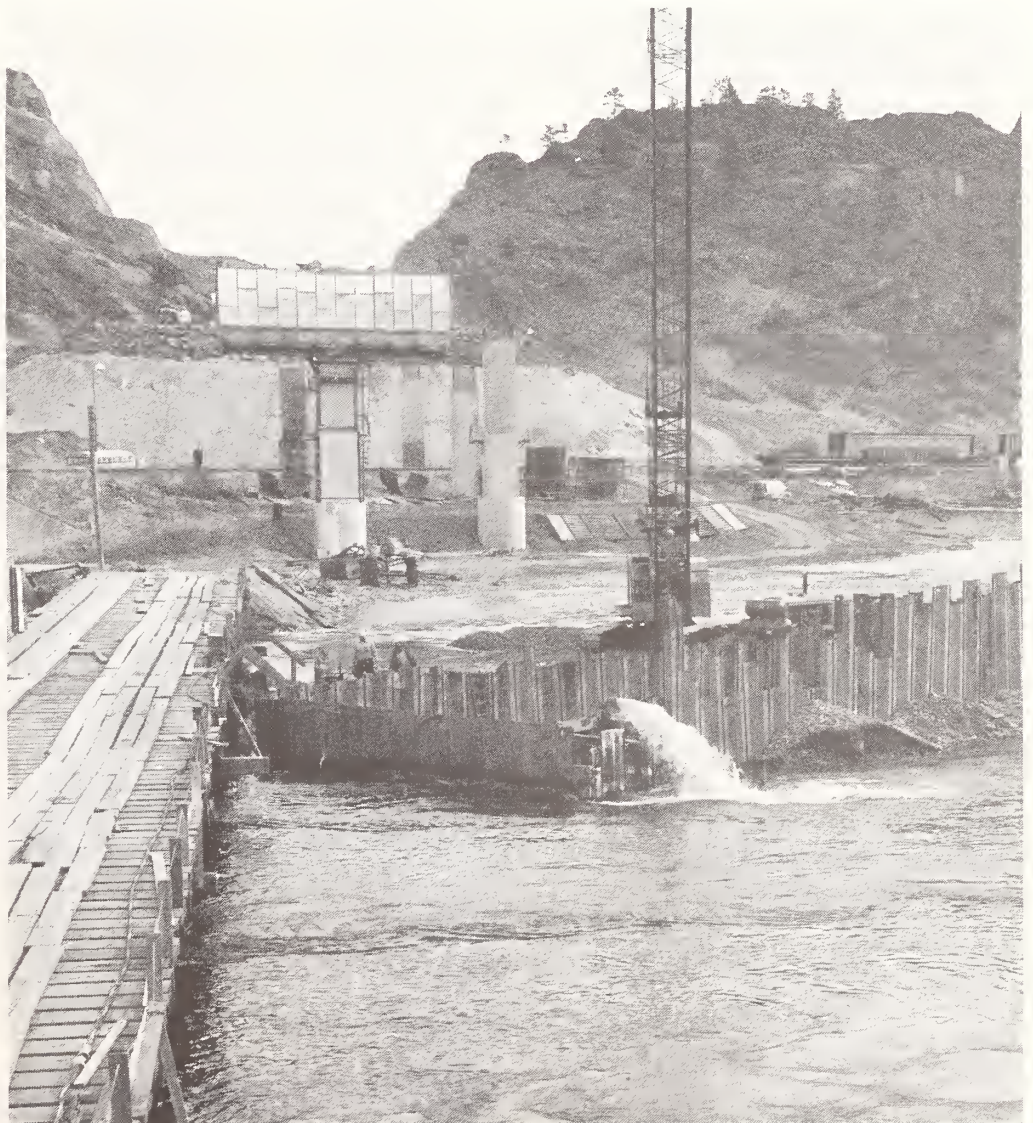
The actual projects authorized for Preconstruction, and the time goals for accomplishing the work involved, are established under the long range plan and program development element. What follows is a matter of

orities, supervising field surveys, representing the Department of Highways at public meetings, assigning personnel to engineer construction projects, and general overall field supervision in their respective divisions.

The eleven Division Maintenance Chiefs are responsible to the Administrator of the Maintenance Division in Helena Headquarters, with responsibilities related to keeping up all state-maintained highways. The Division Chiefs have Field Maintenance Section Supervisors under their direction who with their helpers are the actual maintenance working force.

Each of the Administrative Divisions is staffed with appropriate per-

Looking across a contractor's work bridge as pile-setting equipment drives the steel sheets of a cofferdam preparatory to pouring a large pier. Motorists today are using the completed structure to and from Great Falls.



determining the best way to achieve the requisites for highway betterments as funds become available. Trying to satisfy today's road and street needs calls for a variety of projects,

such as: signalization, lighting, striping, barrier protection or elimination of barriers; uniform signing, drainage and erosion control, to name a few. The major part of the program, how-

ever, becomes essentially the construction of from 4 to 10-mile sections of new Interstate, Primary, Secondary or Urban System highways according to nationally adopted standards.

WHERE THE MONEY COMES FROM *HIGHWAY FINANCING*

The State highway systems correspond to Federal-aid highway systems in that, as Federal-aid highways, they are eligible for financing with Federal funds, at prescribed matching ratios. These funds, then, are used for engineering, right of way acquisition and construction costs. The costs of maintenance and administration of the highways are not eligible for Federal participation and must be paid entirely from State funds.

Federal-aid highway Acts, which are normally passed by Congress in each even-numbered year, authorize Federal funds for the highway systems for two succeeding fiscal years. The funds are apportioned among the several states according to prescribed formulas. During recent years, however, the amount of money that a state can obligate out of its apportioned Federal funds, has been curtailed for various reasons.

This financial curtailment has been especially harmful to Montana because of its large area and extensive highway network, its relatively small population and limited financial resources **and its major dependence on Federal highway funding.** Long-range planning, which is based on apportioned funds, is seriously affected when the obligation funding is cut in half as happened during the fiscal year, 1972.

Matching ratios on Federal-aid projects are as follows:

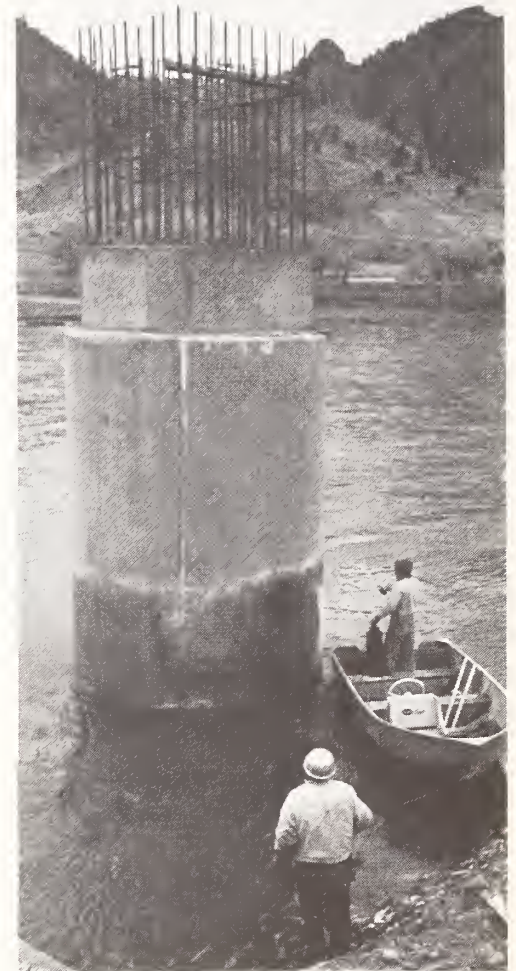
	Federal	State
Interstate System	91.19%	8.81%
Other System	56.61%	43.39%*
Normal average	76.99%	23.01%

*A Federal ratio of 66.07% is permissible, but any State matching funds saved under this ratio must be spent on 100% State-financed construction projects, thus the amount of State funds required is the same under either ratio.

In practice, the Department of Highways pays for all costs on Federal-aid projects and then bills the Federal Highway Administration for the Federal share of such costs.

The following table shows the Federal Aid Apportionment Funds for Montana for fiscal year 1973:

Type of Fund	Amount	Percent
Interstate	\$45,080,000	69.80
Primary—Regular	9,039,766	14.00
Primary—Rural	1,375,379	2.13
Subtotal—Primary	10,415,145	16.13
Secondary—Regular	6,289,160	9.74
Secondary—Rural	957,821	1.48
Subtotal—Secondary	7,246,981	11.22
Urban—Regular	589,799	0.91
Urban—TOPICS	214,472	0.33
Urban System	116,506	0.18
Subtotal Urban	920,777	1.42
Subtotal—Reg. Programs ..	63,662,903	98.57
Economic Growth Centers	917,000	1.43
TOTAL	\$64,579,903	100.00



Building structures obviously leads workmen into areas nautical. This boatman is spraying curing compound on a pier footing.

TOPICS AND E.G.C. FUNDS

The TOPICS (Traffic Operation Plan to Improve Capacity and Safety) Program provides funding for minor traffic improvement projects to relieve congestion in cities. Urban System funds must be spent on streets in cities over 50,000 population.

The Economic Growth Center Development Funds are provided for the improvement of Primary System highways to stimulate the development of rural areas and small communities.

HIGHWAY EMPLOYEES

December 31, 1972

Headquarters	643
Divisions (11)	1412
Temporary and Emergency	87
	2142

HIGHWAY SYSTEMS

The following was the status of the various highway systems as of December 31, 1971:

SYSTEM	Paved	MILES OF HIGHWAY		
		Gravel	Earth	Total
Interstate	1,206			1,206
Primary	5,110	4	47	5,161
Secondary	2,960	2,401	635	5,996
Totals	9,276	2,405	682	12,363

About 281 miles, or 2.27%, of the total mileage is located in incorporated places.

The maximum size of the Interstate and Primary systems is fixed by Federal laws and regulations. There is no statutory limitation on the size of the Secondary System; the size of the system in each county, however, is kept within limits so that roadways can be constructed with anticipated future financing.

SOURCES OF FUNDS

State highway funds are derived entirely from highway-user taxes and fees. The following amounts were received during fiscal year 1972:

Motor fuel taxes	\$33,400,423	80.16%
Gross Veh. Wt. Tax	7,800,190	18.72%
Other Vehicle taxes	465,328	1.12%

Total \$41,665,941 100.00%

Federal funds for highways in Montana come from two sources: (1) 18.75% of the amount collected by the Federal government for leases and permits issued in

the state and, (2) payment of the Federal share of expenditures made by the state for engineering, right of way acquisition and construction on Federal-aid highways. The following amounts of Federal funds were received during fiscal year 1972:

Federal-aid reimbursements	\$ 73,614,391	98.29%
U.S. Lease and permit shares	1,278,127	1.71%

Total \$74,892,518 100.00%

The Federal-aid reimbursements are also derived entirely from Federal highway-user taxes and fees, so,

with the exception of the money received from U.S. Leases and Permits, the costs of constructing, maintaining and administering highways are paid entirely out of highway-user taxes and fees.

Of the total income to the Department of Highways during fiscal year 1972, 64.25% came from Federal funds and 35.75% came from State highway-user taxes and fees.

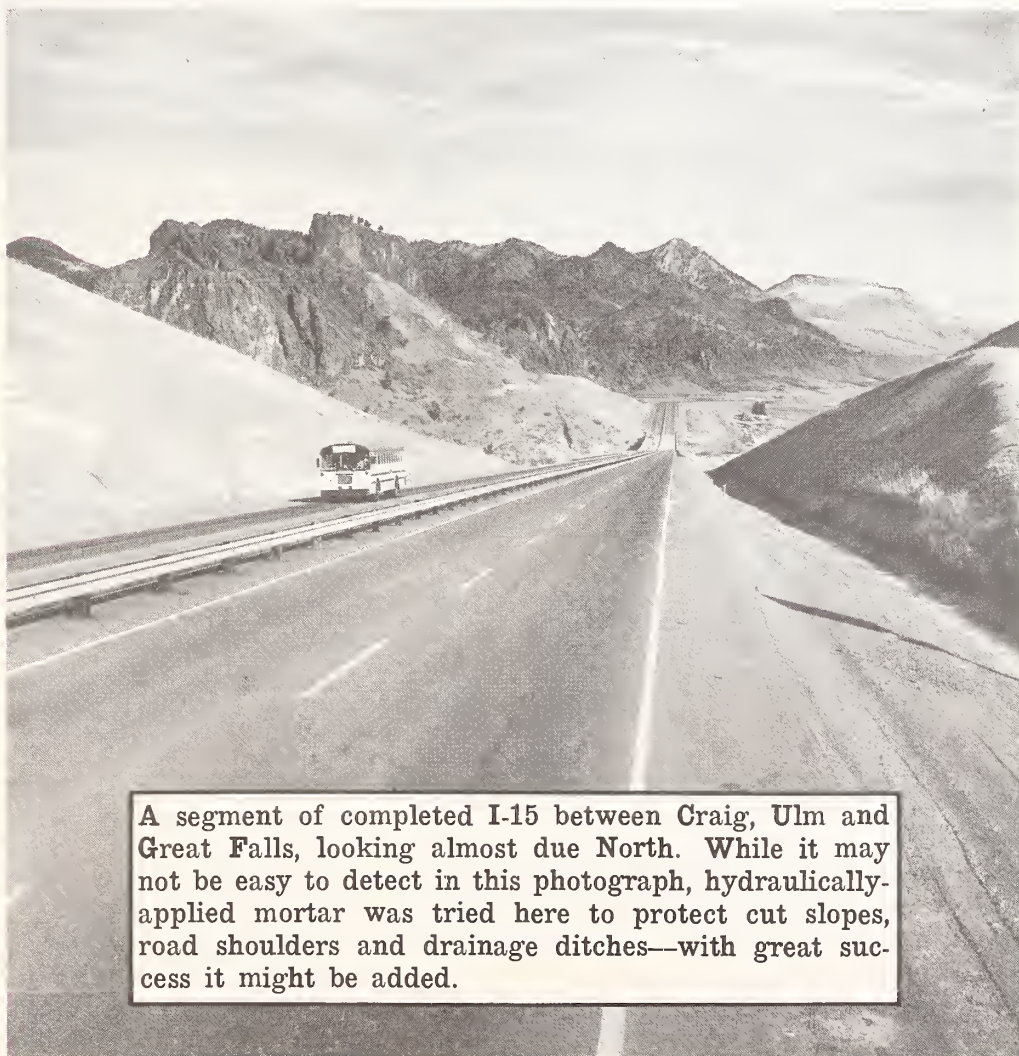
EXPENDITURES

Expenditures by the Department of Highways during fiscal year 1972 were as follows:

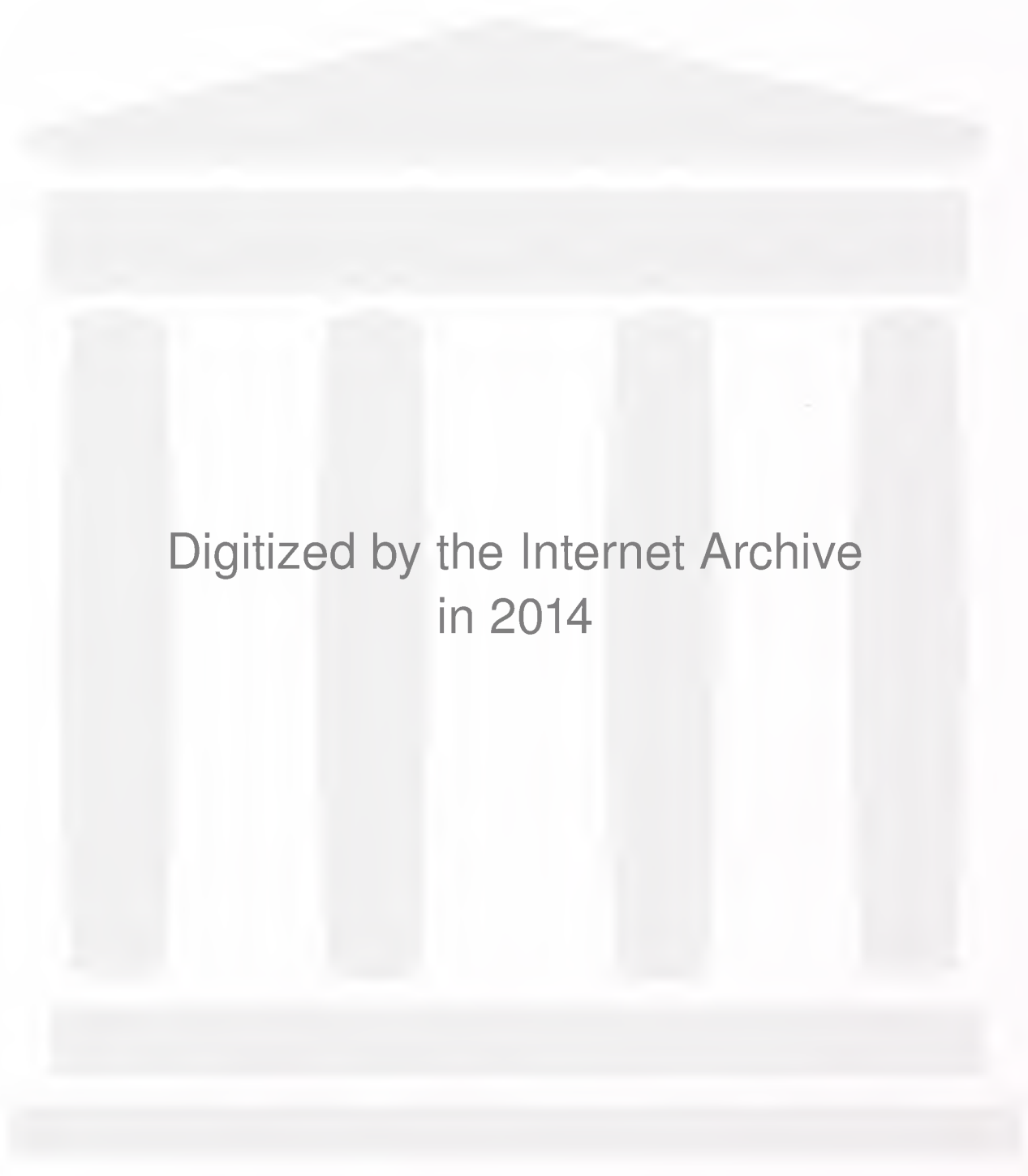
Gen. Operations	\$ 4,431,583	3.65
Construction	91,753,471	75.64
Maintenance	15,014,853	12.38
Advertising	600,151	0.49
Preconstruction ..	8,848,578	7.30
Reim. Services	625,515	0.52
Buildings	21,627	0.02

Total\$121,295,778 100.00

The expenditures for the Construction Program include allocations of \$1,800,000 per year to the cities from the Highway Fund and \$1,200,000 to the counties for expenditure on city streets and county roads. This money must be spent for construction purposes, with the exception of 10%, which may be spent on maintenance.



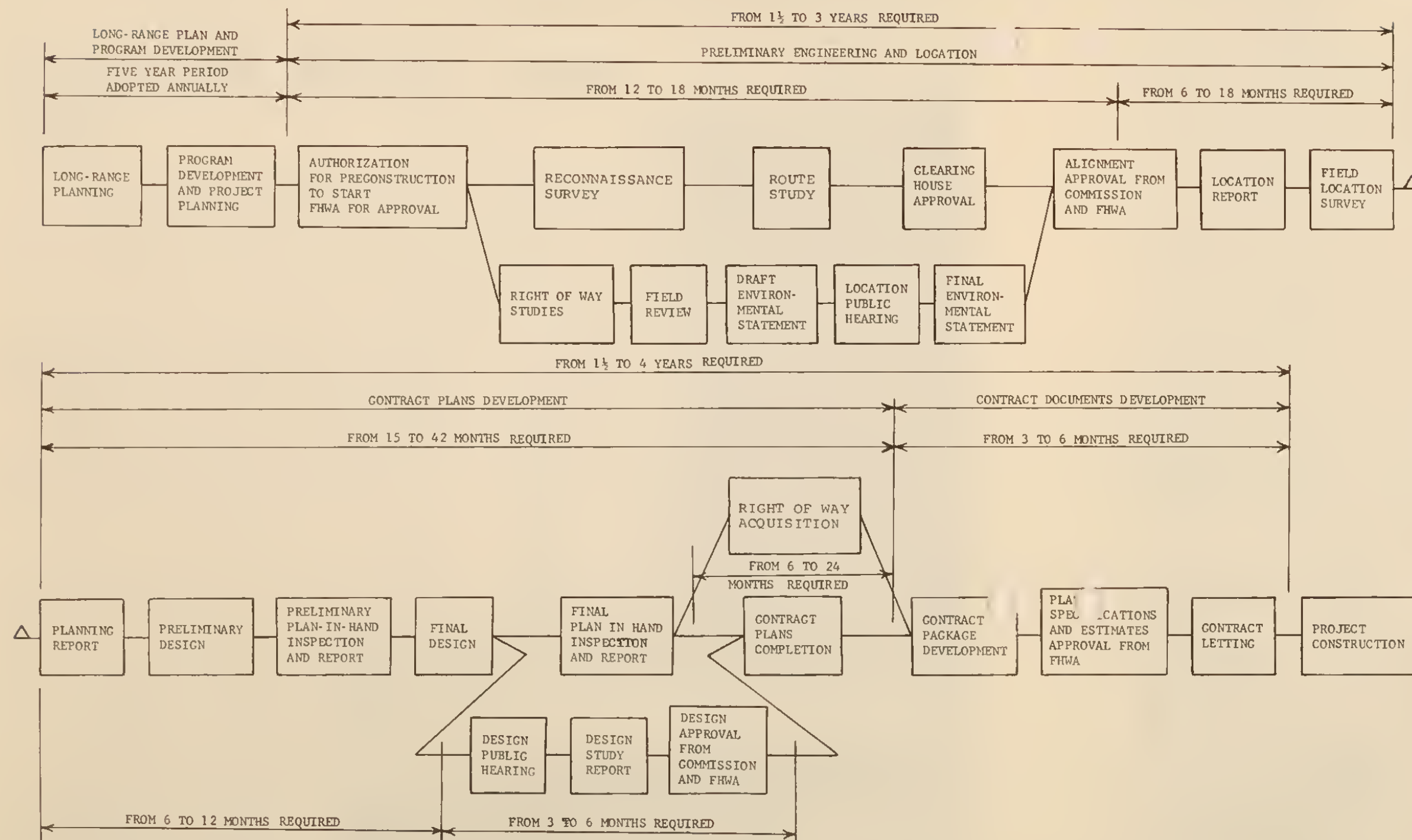
A segment of completed I-15 between Craig, Ulm and Great Falls, looking almost due North. While it may not be easy to detect in this photograph, hydraulically-applied mortar was tried here to protect cut slopes, road shoulders and drainage ditches—with great success it might be added.



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PRECONSTRUCTION ACTIVITIES PRIOR TO BUILDING A ROAD



IT TAKES FROM FIVE TO SEVEN YEARS TO DESIGN AND BUILD A ROAD

Need for new highway determined. Program and program approval. (We have far more needs in Montana than money, thus a "Need" must be substantial, indeed, to rate program approval.)

Photogrammetric mapping delineates alternate highway locations.

Engineers draw up preliminary plans for alternates.

Draft Environmental Statement, or Statements.

Corridor public hearing held to determine exact route.

Geometric layout and profile estab-

lished.

Soil information obtained.

Final design surveys for roadway, bridges, and utilities completed.

Right of Way maps prepared.

Roadway, bridge and utility designs continued.

Public hearing held on major design features, and subsequent approval given.

Department representative personally contacts land owners to secure Right of Way.

Plans, Surveys and Estimates Field Conference compares design against

actual terrain and approves and authorizes roadway, bridge and utility design.

Construction surveys begun.

Bid proposals solicited, assembled and bid letting held.

Project award made for road and bridges.

Insurance, licenses and bond cleared.

Pre-construction conference held.

Land cleared and grubbed and excavation begun.

Utility relocation begun and completed before clearing and grubbing.

Drainage construction begun and completed before grading is completed.

Grading begun and completed.

Bridges, begun during other work phases, now completed.

Riding surface placed.

Striping, signing, landscaping, erosion control, etc. completed.

Inspection of all items of work continuously performed.

Critical measurements and tests for final road inspection.

Project accepted from contractor.

Completion.

AUGMENTED FLOW CHART

I. RECONNAISSANCE PHASE

1. Aerial Photography and Small Scale Contour Mapping
2. Wide Band Ownership Map
3. Geological Report
4. Feasibility Studies
 - a. Traffic Volumes
 - b. Construction Costs
 - c. Economic Analysis
 - d. Narrative Right of way Report and Cost Estimate
5. Location Approval
 - a. Other Agency Contacts and Reviews
 - b. Clearing House Action
 - c. Draft Environmental Impact Considerations
 - d. Location Public Hearing
 - e. Approval-Hwy. Comm. & FHWA

II. DETAILED SURVEY AND PLANNING PHASE

1. Aerial Design Mapping and Field Surveys
2. Planning of Major Design Sections and Access Features
3. Soils, Foundation, and Slope Design Investigation and Report
4. Preliminary Hydraulic Considerations
5. Preliminary Considerations for Intersections, Interchanges, Rest Areas, Scenic Overlooks, etc.
6. Preliminary Design Proposals are Endorsed by Responsible Agencies

III. DESIGN PHASE

1. Prepare Preliminary Design Plans
2. Review and Acceptance of Preliminary Design in Consideration of Concerns and Views of Various Responsible Representatives Involved. (Construction, Geology, R/W, Railroad, Fish & Game, Federal Highway Forest, County, City, etc.)
3. Finalize Environmental Impact Considerations
4. Prepare Preliminary Right of way Plans
5. Develop Special Hydraulic Design
6. Develop Design of Intersections, Interchanges, Rest Areas, Scenic Overlooks, etc.
7. Design Public Hearing
8. Design Approval
9. Final Check of Design Plans
10. Design Study Report
11. Submit Plans to Right of way
12. Incorporate R/W Considerations and Submit Final Plans to Office Engineer

IV. PLANS, SPECIFICATIONS AND ESTIMATES PHASE

1. Complete Necessary Agreements With Cities, Counties, or Other Agencies That are Financially Involved
2. Prepare and Complete Contract Documents, Proposals, Special Provisions, Cost Estimates, etc.
3. Final Board of Review by Representatives of Construction Bureau, Materials Bureau, Construction Section and Preconstruction Section.
4. Clear P.S. & E. Documents* With Federal Highway Administration and Advertise for Contract Bids
5. Mail Out Reduced Plans and Other Documents to Prequalified Contractors With Notice of Deadline for Receipt of Sealed Bid Documents and Time and Place of Bid Openings
6. Formal Public Bid Opening. Final Check and Tabulation of Bids for Highway Commission and Federal Highway Administration Action on Awarding Contract.

* Plans, Specifications & Estimates

DISTRIBUTION OF CONSTRUCTION FUNDS

State highway construction funds are divided among the highway systems, financial districts, counties and urban cities according to the statutory formulas that follow. Bear in mind that funds are divided among all highway systems in proportion to the amount of State funds required to match Federal funds available for each system.

INTERSTATE SYSTEM—in proportion to the estimated costs of completing construction of the system in each financial district.

PRIMARY SYSTEM—in proportion to the amount of deficient system mileage in each financial district, as determined by an annual review which evaluates the sufficiency of each section of highway.

SECONDARY SYSTEM—in proportion to the rural road mileage, rural population, land area and value of rural lands in each financial district and each county.

URBAN FUNDS—in proportion to the population in each urban city.

Although the State statutes govern only the distribution of State funds, the control also applies to federal funds because the State funds are used to match a proportionate amount of Federal funds.

FINANCIAL DISTRICTS

The following counties make up the 12 financial districts.

Financial

District	Counties
District 1—	Flathead, Lake, Lincoln
District 2—	Blaine, Glacier, Hill, Liberty, Toole
District 3—	Daniels, Phillips, Roosevelt, Sheridan, Valley

District 4—	Dawson, McCone, Prairie, Richland, Wibaux
District 5—	Fergus, Garfield, Petroleum
District 6—	Cascade, Chouteau, Judith Basin, Pondera, Teton
District 7—	Broadwater, Jefferson, Lewis and Clark
District 8—	Granite, Mineral, Missoula, Powell, Ravalli, Sanders
District 9—	Beaverhead, Deer Lodge, Madison, Silver Bow
District 10—	Gallatin, Meagher, Park, Sweet Grass, Wheatland
District 11—	Big Horn, Carbon, Golden Valley, Musselshell, Stillwater, Treasure, Yellowstone
District 12—	Carter, Custer, Fallon, Powder River, Rosebud

It is important to note that the Interstate routing goes through nine financial districts. Financial Districts 1, 3, and 5 do not have Interstate route, thus such funds are not allocated to them.

An interesting experiment worked out at the Pine Hills Interchange near Billings, to see how well mature trees would do in the business of taking care of themselves, while providing instant shade. In most instances, the experiment is working out—especially with the evergreens.



An aerial photograph showing the then almost completed section of I-90 between Cardwell and Three Forks as it traced a graceful track through the hills. At this point the contractor had his men out setting guard rail posts in the median.



RIGHT OF WAY RELOCATION PROGRAM

The relocation assistance program for persons displaced by new highway alignments, is a continuation of the program first started in 1971. It is the policy of the Department that no person shall be displaced by the construction of any state highway, unless and until adequate replacement housing has been provided.

Thus, when the Department contacts a person in regard to the acquisition of his property, an offer of relocation assistance is presented and explained. All replacement housing offered is fair housing: open to all persons regardless of race, color, religion, sex or national origin. A person has at least 90 days to vacate his dwelling after negotiations have been completed.

Replacement housing payments are made to eligible persons over and above the payment for the property itself.

GROSS VEHICLE WEIGHT DIVISION

The Gross Vehicle Weight Division is responsible for the collection of statutory fees provided in Montana law as follows:

- Gross Vehicle Weight Fees
- Size and Weight Special Permits
- Proportional Fleet Registration of Interstate Vehicles
- Special Fuel User's Temporary Trip Permits
- Importer's Gasoline Tax
- Registration of Motor Vehicles
- Proration and Reciprocity Agreements with Other Jurisdictions

Presently, twenty-four stations are being operated throughout Montana for vehicle inspection, issuance of permits and enforcement of laws under the administration of the Department of Highways.

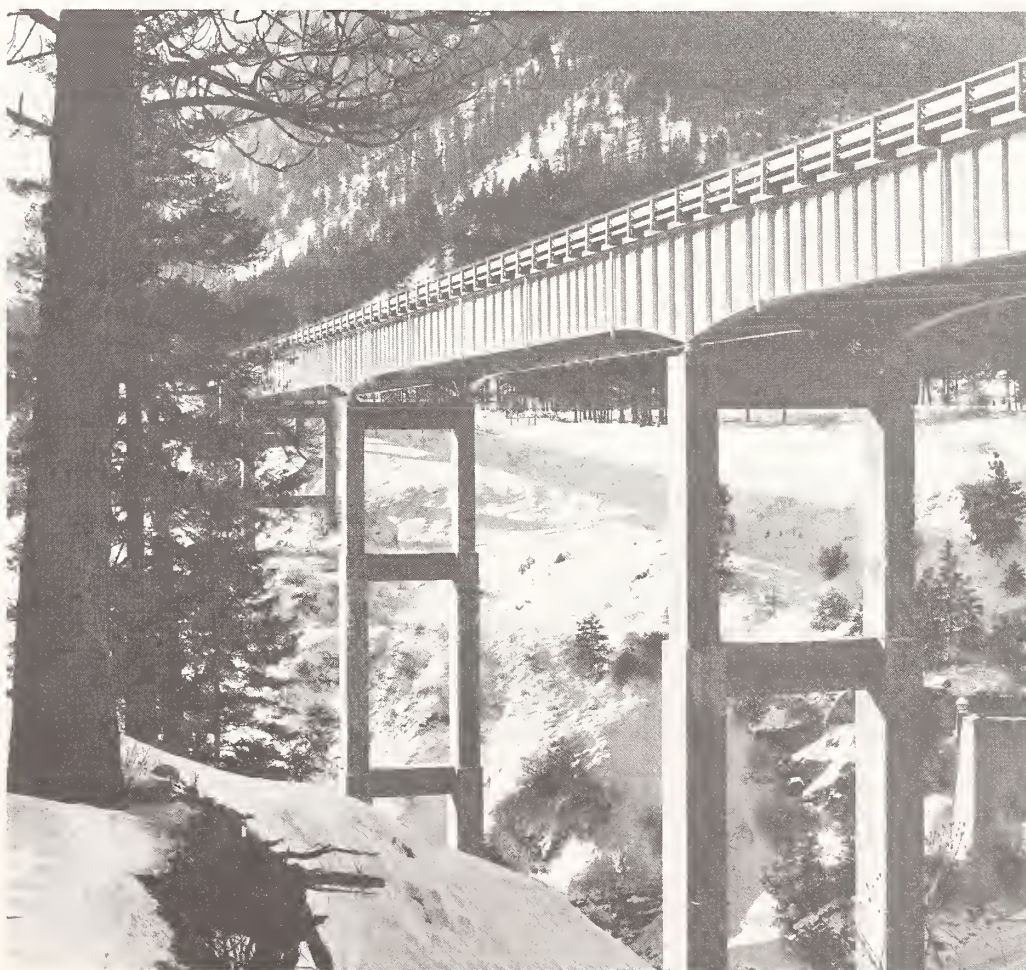
During 1972, enforcement person-

(continued on page 10)

• Safety features engineered into the completed Interstate System will help save an estimated 8,000 lives a year.



A view of Frenchtown Pond on I-90 west of Missoula during one of the early construction phases. This pond is essentially a borrow area, here shown being constructed to fill recreational needs, for swimming, boating and fishing. When completed, what would have been an eyesore, will be a delight instead to motorists, vacationers, and local people.



"Scenic Bridge" on I-90 west of Missoula—all that its name implies, not only in structural design but in its awesome location.

G. V. W. (from page 9)

nel made 1,100,000 vehicle inspections for compliance with registration, Diesel fuel, Gross Weight fees, and weight statutes. Fifty-three men are assigned to enforcement duties and included are two supervisors, five roving scalemen, and forty-six permanently stationed scalemen.

The G.V.W. Division has twenty-one employees assigned to administrative duties in Helena, which include issuance of special permits for excess size and weight, inventory control of permits, collection and issuance of identification for quarterly G.V.W. fee payments, and proportional registration.

There were in excess of 110,000 vehicles registered in 1972 through proration, which is a complete and total registration.

In addition, numerous booklets and information sheets are prepared for public distribution to give help and assistance in complying with laws and regulations.

THE ROLE OF FHWA (Federal Highway Administration)

Federal Highway Trust Funds are apportioned by Congress to each State in the Union. These funds are administered by the Federal Highway Administration, which is responsible for reviewing, approving or rejecting requests for Highway Trust Funds. The State Department of Highways is in the position of planning projects, establishing priorities, justifying expenditures, and requesting the needed Federal Funds through the Federal Highway Administration. State departments must meet all federal requirements established by Congress to qualify for Federal Funds; thus there must be a close working relationship between the two agencies, as exists presently in Montana.

Every major action required in the development of a project, such as program, location and design approval; environmental impact statements and final plan approval is done by the Department of Highways; but before a project can move to the next phase, the FHWA must give its approval. Every facet of project development

MAINTENANCE

"A BIG JOB"

Maintenance in the Department of Highways is a dual function: 1—preserve the original constructed roadway, roadside structures, and traffic aids; 2—provide the services necessary to keep traffic moving over this system 365 days a year, in a manner as safe as possible.

Costs involve 100% State Funds. No Federal money can be used. The state-maintained road system has increased from 6,128 miles in 1962 to 8,111 miles in 1972. This is about a 200-mile increase each year and will continue.

Approximately half of the 5,000 miles of the primary system was constructed 25 years ago, and there are 603 miles of the system that are 40 years old. Maintenance costs on these older sections are nearly double the costs of the new sections.

Some of our interstate systems are 15 years old; in the near future, many of these older sections will require surface maintenance and some patching. Sealing will be a must. Since each lane is 38 feet wide, a larger outlay for materials and labor is contemplated.

During fiscal year 1972, the 8,111 miles maintained cost \$11,825,837.37, or \$1,458.00 per mile. Overhead costs, supervision, building repairs, radio upkeep, rest area expense, shop equipment and related items cost an additional \$1,701,686.83—to bring the average cost per mile to \$1,667.80.

A partial breakdown of this substantial expenditure shows some interesting facts: Plowing snow and sanding this system last year cost \$3,171,153.46; stripping \$768,033.88, weed control \$396,403.24, maintaining our rest areas \$169,909.16. Repairing damage caused by vandalism of signs, delineators and rest areas cost \$104,192.50. Housekeeping, litter pickup and disposal units cost \$241,559.03. Lighting (interchanges) amounts to \$91,012.94.

While maintenance is a "Big Job" accompanied by impressive costs, nonetheless, the most for the tax dollar can be accomplished by doing preventive maintenance work before deterioration happens and augmented with sensible purchase of modern man-and-hour saving equipment.

The Department of Highways maintenance operations is broken into 11 Divisions with a total of 766 field employees. There are 8,111 miles of roads divided into 137 sections which average 59 miles in length.

Equipment utilized by maintenance, such as trucks, plows, motor patrols, loaders, sanders, etc. have an original cost value of \$12,782,666.67.

WHEN FUNDS ARE FROZEN

As of December 31st, 1972, \$50,000,000 in Federal Funds were frozen. When such funds are withheld, it causes inevitable delays in the letting of construction projects. This in turn results in unemployment statewide, and reductions in work available for our division field forces. Layoffs of our people can result from this unhealthy chain of events.

It has been our policy when

Federal Funds are withheld to continue to provide funds for preliminary engineering, rights of way and utilities so that these activities can continue and the projects be developed; thus, when these Federal Funds are released, projects will be ready to utilize the monies. The "on-again, off-again" nature of such irregular money management, however, effectively reduces department stability and cuts down lead time and efficiency.

is double checked by the Federal Highway Administration to be assured that all federal requirements are being met by the State. Without FHWA approval, Federal Funds would not be available.

This, in short, is the basic relationship between the two agencies.

- Streets and roads in the U. S. occupy less than one percent of the total land area. In urbanized areas, the average is 25 to 30 percent, about the same as before the automobile was invented. Highway mileage is increasing very slowly, with most road building investment going into improvement of existing systems.



A view of a typical maintenance shop with its equipment ready for the onslaughts of a Montana winter. Plows, rotaries, sanding trucks and patrol pickups are shown in this picture. Each of these units sees heavy winter duty.

ROAD BUILDING SKILLS

(continued from page 3)

pool and several other closely tied-in activities. As this account builds, attention will be directed at some of the divisions which, because of their work nature, come frequently to the attention of the general public: engineering—right of way—design—preconstruction—maintenance—secondary-urban unit—traffic unit, etc.

Today, a fast-moving concern for the environment—for ecology, the eco-systems surrounding us—has imposed another heavy load on the Department of Highways. There is hardly a single aspect of road design and construction that does not have to be studied in relation to its impact on something else. The chain is long and tortuous. The preparation of an environmental statement pertaining to a given highway corridor must be studied and put together with exceptional care. It will be reviewed by both governmental and environmentally-conceived agencies before design concepts may be laid in place in solid form. Presently, the impact of the noise expected to be generated from a highway of certain proportions, and carrying a predetermined traffic load, must be predicted; and then engineering designs created, altered or upgraded (even by innovative techniques) to reduce the expected racket to a minimum.

These manifold requirements apply not only to a single section of proposed highway but to every one of the alternates being considered.

Such requirements demand multidisciplinary team approaches in order to produce definitive, understandable and acceptable assessments of the situations involved. Environmental impact statements are costly, and they are difficult and arduous to produce. Nonetheless, highway engineers are the first to concede that environmental impact statements now are a "way of life."

ADVERTISING

Goal: Encourage travel to and within the State by out-of-State visitors. The department is responsible for advertising and publicity to attract a steadily increasing number of visitors and vacationers into Montana.

Objectives: Acquaint out-of-State residents with the attractions of the State by supplying attractive maps, brochures and other publications describing the many points of interest.

Achievements: In 1972, the advertising program was expanded, using more outdoor, radio and TV, and was tied into the 100th anniversary of Yellowstone National Park. On a five-state radio trade-out, Montana received over \$10,000 worth of spots

from Omaha alone for a \$1,500 investment.

Three 16mm half-hour movies are circulating through the United States, Canada, Japan and Europe. Each film will be seen by 17 million viewers in a three year period.

A new ski movie, sponsored by the State Advertising Unit and the Montana Power Company, is being prepared for TV with a 17 million home distribution in two and a half years. This film will be ready for release in September, 1973.

The film, *MONTANA, LAND OF THE BIG SKY*, won a Cine Golden Eagle Award in Washington, D.C., and the Sunset Film Festival in Los Angeles for being "The best domestic travel film by a government agency in the United States."

In commemoration of Yellowstone's Birthday, a hundred thousand brochures were printed showing four major routes between the two parks in an effort to swing Yellowstone traffic north to Glacier.

Montana is now bringing in four editors, including a winter writer, each year. National Geographic and Better Homes and Gardens were hosted last summer plus a free-lance winter editor last winter. Montana also participated in four travel shows through the Pacific Northwest Travel Association.

OLD WEST TRAIL—(Montana, Wyoming, North and South Dakota, Nebraska)—Conoco distributed 800,000 Old West Trail fliers to credit card holders in 48 states this spring.

Plans include the production of a map-booklet again in 1973, with 38 pages, as was done in 1970-71. This booklet won national honors in Los Angeles and is a real travelers' aid.

On a phone spot-check of key attractions in the state, Montana shows a 10% gain, overall, for the summer of 1972 over 1971. This is 5% higher than the 1971 over 1970 period gain. If highway count figures reflect this increase overall, it can mean that 1972 out-of-State visitations brought in 14.5 million dollars more to the state than in 1971.

THE STATE MOTOR POOL

The present State Motor Pool program has been in operation since July 1, 1971, and the statistics for

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MOTOR POOL

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the first year of operation ending June 30, 1972, showed 1,951 vehicles travelled a total of 22,858,328 miles, at a total cost of \$3,531,644.11.

Over-the-road vehicles from all State agencies were taken into the motor pool with the exception of those from the Fish and Game Commission, Employment Security Commission, Public Welfare Department and the Superintendent of Public Instruction Department in deference to claims by these agencies that their respective Federal funds would be jeopardized by participation in the Motor Pool program. Presently, the Motor Pool is in litigation to determine whether or not it can own state vehicles and charge state agencies an assessment for depreciation.

The motor pool fleet was increased by 133 vehicles during 1972 to pro-

vide for the expansion of some agencies, and the complete outfitting of others which had no State-owned vehicles previously.

The insurance premium for the State motor pool fleet for fiscal year 1973 was reduced from the fiscal year 1972 premium in the amount of \$17,676.03 in spite of the 133-vehicle increase. The insurance carrier advised that this decrease in premium was

mostly attributable to the good first year operation record. A realistic total transportation cost figure has resulted from the motor pool operation. It has become obvious, however, that in order to make the Motor Pool fully effective, all agency vehicles must be under its control; and, further, the use of state vehicles should be mandatory.

A car-window shot of Bearmouth Pond, just west of Drummond, on I-90.



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The western portion of Montana can be magnificent in a stark, dramatic and gigantic way. This situation has made many a driver say to himself: "a well maintained road in winter is a thing of beauty." We might add, in a beautiful spot.

Here is a shot of a heated rest area on the Interstate in Montana. Delightfully designed, carefully situated, with well laid-out grounds.